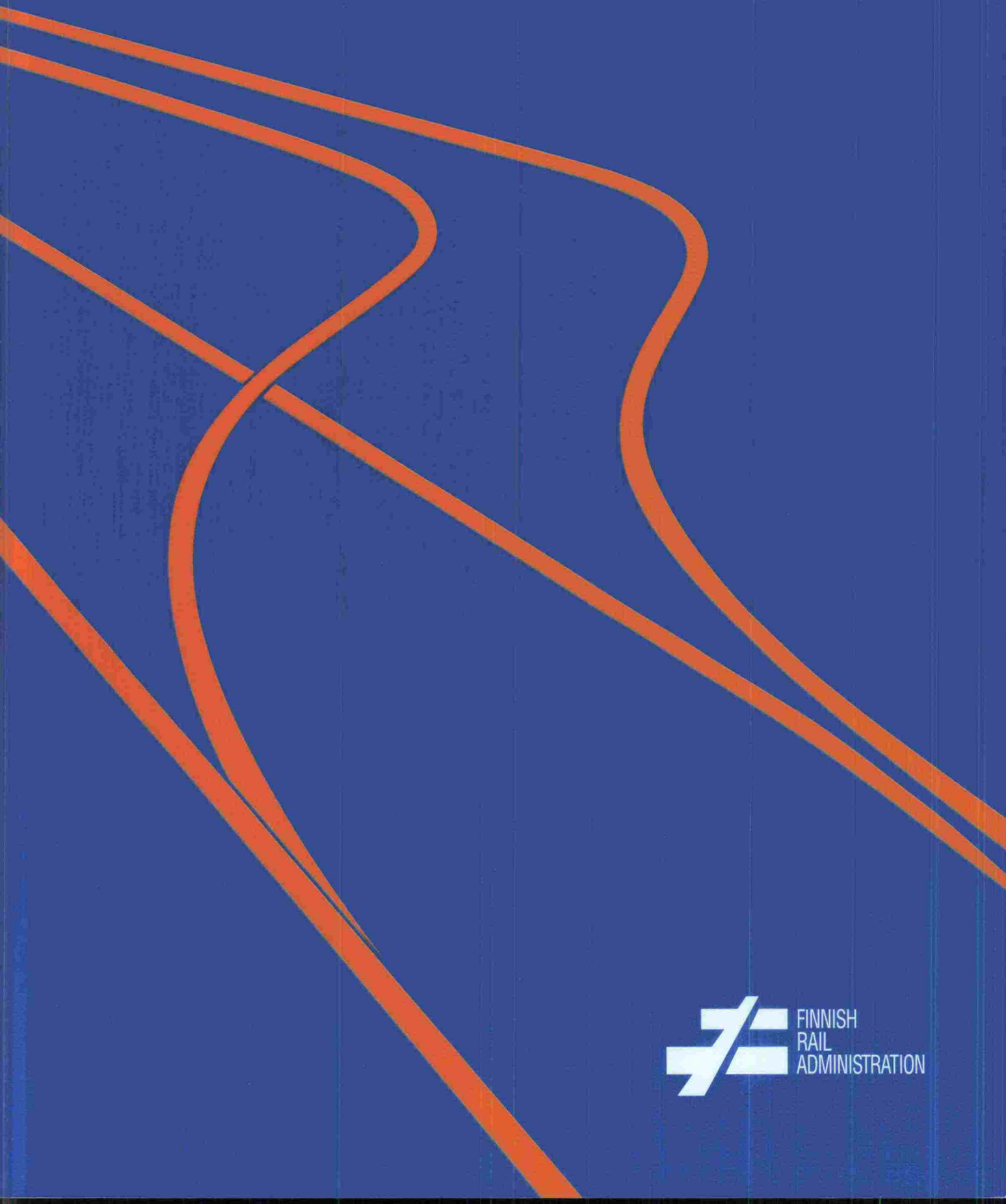
ANNUAL REPORT
2004



FINNISH
RAIL
ADMINISTRATION

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Mission

The Finnish Rail Administration (RHK) works to improve the operating conditions of rail traffic as an efficient, safe and environmentally friendly part of the domestic and international traffic system.

- RHK is in charge of maintaining and developing the rail network, is responsible for the safety of rail traffic and provides a competitive transport network for use by railway companies.
- RHK takes into account the transport needs of industry and commerce as well as public transport needs.
- RHK operates in accordance with the principles of sustainable development.
- RHK works actively to influence issues that affect Finland's traffic policy and infrastructure.

Director General's Review

Last year brought two significant improvements to our rail network. The urban line from Tikkurila to Kerava was completed in the summer and the first stage of line electrification in northern Finland - between Oulu and Rovaniemi - late in the year.

To develop public transport in the Helsinki region, the state, the cities in the region and the Helsinki Metropolitan Area Council have worked together for many years. All three sides have been and still are needed so that rail transport as part of public transport in the region can develop as an alternative to private motoring. This requires transport system vision, planning solutions and of course the will to invest together.

From the viewpoint of the infrastructure manager and the rail operator the new urban line and its transport model are a very successful extension of the existing urban line structure. We can also note with satisfaction that this demanding cooperation project was carried out according to plan and on schedule, which is an indication of the implementing parties' high level of competence.

Electrification of the northern line was celebrated in the beginning of December. The special train arranged for this purpose received an exuberant welcome in Rovaniemi, which says something about the need for electrification as part of the development of rail transport. The start of electrified traffic will not bring new passengers unless improvements are made in services, however. Between Oulu and Rovaniemi the line and traffic control and safety systems were also improved. When new trains were introduced, passengers received a faster, more pleasant and environmentally friendlier rail connection. For freight traffic the important thing is of course to develop transport economy and competitiveness.

Electrification will proceed from Oulu towards the Russian border and Iisalmi and will be completed in 2006. Concrete decisions concerning further electrification during the present Government's term do not exist, as a result of which RHK started a study to determine the need for and feasibility of further electrification. The number of line sections on which electrification can achieve significant benefits appears quite limited.

During the year we also had to draw attention to less pleasant matters. A constant problem in track maintenance is line sections with very low traffic volumes. What can and will be done with the financing available for the rail network is not up to the infrastructure manager alone. The issue involves transport policy, regional policy and business policy, and all the parties concerned must join in seeking solution models. The hardest thing is to find an overall solution with which everyone is satisfied. RHK's task is to present alternatives and their impact as comprehensively as possible.

Questions concerning the development and organization of RHK's activities received a lot of attention last year. This was influenced by internal needs as well as external reports. RHK's resources are still too small in relation to tasks, as external evaluations also clearly showed. This is visible in problems involving time use among employees in general and managers in particular. Solutions have been sought by increasing resources and developing activities and the organization. The most important tool has been building RHK's operational system and preparing for reorganization, which reached the final stretch last year.

The entry into force of the EU's second rail package together with the opening of freight traffic to competition in 2007 and the establishment of a new safety authority in 2006 will force RHK to adjust to changes in its activities. The new authority will be responsible for rail safety and interoperability and will take over part of RHK's present tasks. The opening of competition will mean new obligations especially when it comes to allocating rail capacity and timetable matters.

Late in the year RHK's basic task of ordering track maintenance work was in the spotlight in connection with tendering. When RHK was established in 1995, the point of departure was that it should outsource and procure services on competitive markets to a very high degree. The problem has been the lack of an efficient market, so RHK has had to promote the sort of development in which competition is possible.

Progress has been made in tendering mainly in construction projects, and the results with regard to price development, for example, have been encouraging. Last year the first steps were taken in putting track maintenance out to tender, and on the basis of experience the future timetable will be decided. Safety, price and quality are the criteria used in evaluations.

Track maintenance work has been entrusted to outside contractors and RHK's task is to procure services in the manner required by law. We will continue operating on this model.

Ossi Niemimuukko

Operating Environment

Developing administration and the scope of the rail network

RHK's task is to create the proper conditions for efficient rail traffic. The point of departure in maintaining and developing the rail network is the transport needs of domestic and international customers. At present Finland has only one rail operator, VR Limited, which provides passenger and freight services. Changes in the operating environment and traffic must be taken into consideration in infrastructure management. Last year RHK explored the reform of administration in the rail sector and initiated a study concerning the future of some line sections with low traffic volumes.

Continued rise in long-distance passengers

Growth in the number of journeys in long-distance traffic continued for the third year in a row, with the total rising by 2%. There was a slight decline in traffic between Finland and Russia last year, with journeys falling by 2%.

Long-distance journeys returned to the same level as in 1997, when they last exceeded 12 million. The number of passengers rose most on the main line between Helsinki and Tampere, where travel times were shortened in summer 2003. Growth was also recorded on many other line sections in southern and western Finland. Traffic in other parts of Finland remained more or less unchanged. The average length of journeys fell.

The next significant improvement in long-distance services will come in 2006 when the direct line between Kerava and Lahti will open. This will make it possible to speed up rail services between Helsinki and eastern Finland and to increase services between Helsinki and Tampere. Long-distance journeys should therefore keep on growing in the coming years.

Commuter journeys at the same level as the year before

The Kerava urban line went into operation in August 2004.

The number of passengers on commuter services in the Helsinki region remained unchanged last year. Journeys declined slightly in the Helsinki metropolitan area but rose in the rest of the region.

The preconditions also exist for further growth in commuter traffic.

Total journeys break the 60 million mark

Passenger traffic totalled 60.1 million journeys in 2004. This included 48.0 million in commuter traffic and 12.1 million in long-distance traffic. Traffic between Finland and Russia totalled 252,000 journeys. Passenger traffic rose by 0.4% compared with the year before.

Railways account for about 5% of passenger traffic in Finland. The average market share in the EU is 7%.

Domestic freight traffic up, eastern traffic down

The volume of rail freight totalled 42.7 million tonnes in 2004. This was 0.8 million tonnes or 2% less than the record figure the year before.

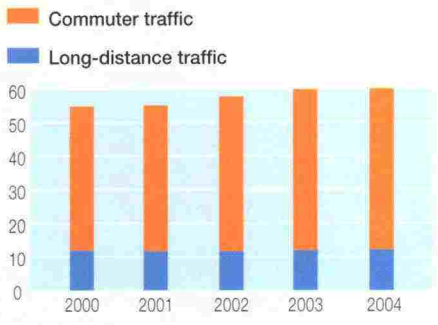
Domestic freight traffic rose by 5%. International freight traffic fell by 11%, owing to a 16% drop in traffic between Finland and Russia. Transit traffic remained unchanged while western traffic was up 17%.

Railways' share of freight traffic in Finland is high by European standards. With a market share of about 25% Finland ranks among the top EU countries. The average in the EU is about 16%.

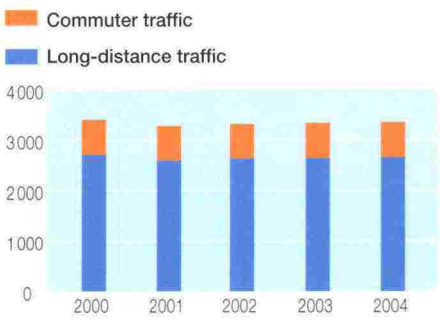
Preparing for changes in administration

A working group that was appointed by the Ministry of Transport and Communications

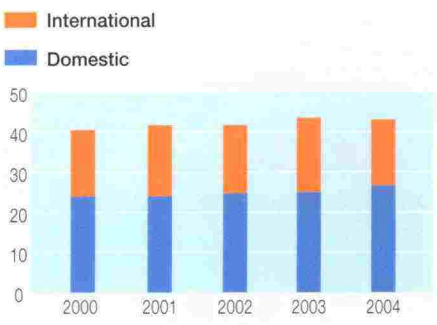
Passenger journeys, million



Passenger-km, million



Freight volume, million tonnes



to study the development of administration in the transport sector presented its report in spring 2004 and emphasized the importance of coordinating strategy and intensifying cooperation in certain areas.

A report by another working group on the development of administration in the rail sector and the arranging of certain official tasks was presented to the ministry at the same time. This was based on a new EU directive that requires the establishment of a national safety authority operating independently of the infrastructure manager in the rail sector.

The working group analysed the possibility of establishing an authority with responsibility for more than one mode of transport. It did not recommend this, however, because of opposition from different modes of transport. The size of the new rail authority was left open and rapporteurs appointed by the ministry presented their views on this matter in the autumn.

Getting ready to open freight traffic to competition

The rail freight traffic market will be opened to new operators at the beginning of 2007. This means a big change in culture for the rail sector in Finland as well as new tasks for RHK, which will have to coordinate operators' timetables and see that traffic control is balanced.

RHK will have to make sure that new actors are competent to operate in Finland's rail network. This requires the expansion of RHK's expertise and the development of new procedures.

Rethinking the scope of the rail network

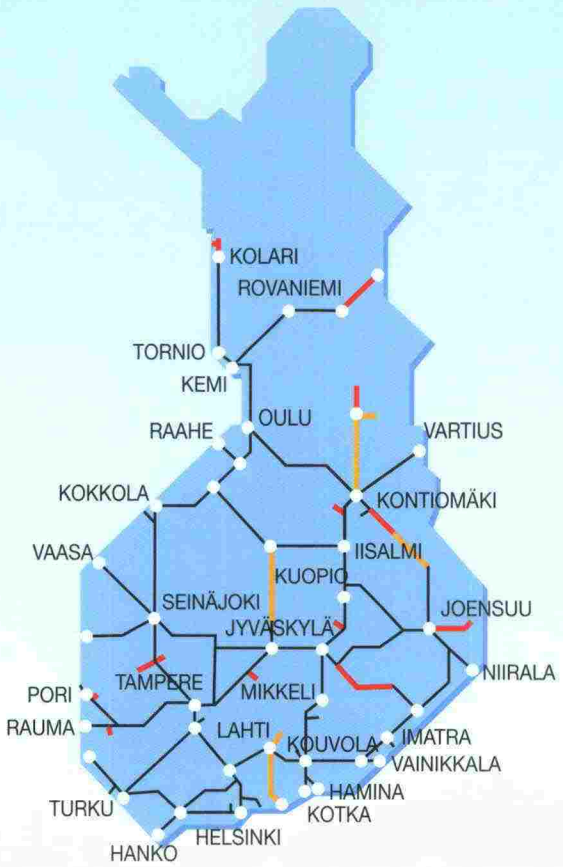
Transport demand on some line sections has fallen considerably over the years. Since these line sections are due for renewal, their significance in Finland's transport system should be thoroughly evaluated, along with their regional role.

In autumn 2004 RHK began a dialogue with local authorities, business and regional councils in order to assess all the threatened tracks and provide a broad database for action proposals and decisions. This work will be completed in 2005.

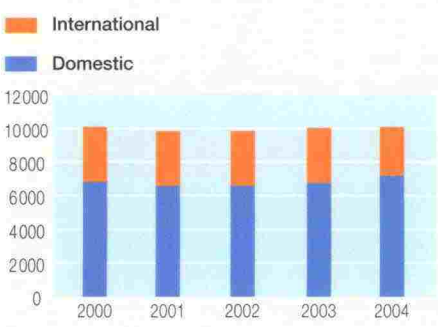
Line sections to be assessed in the planning process for threatened tracks

536 km
Time line for required investments 2005–2010

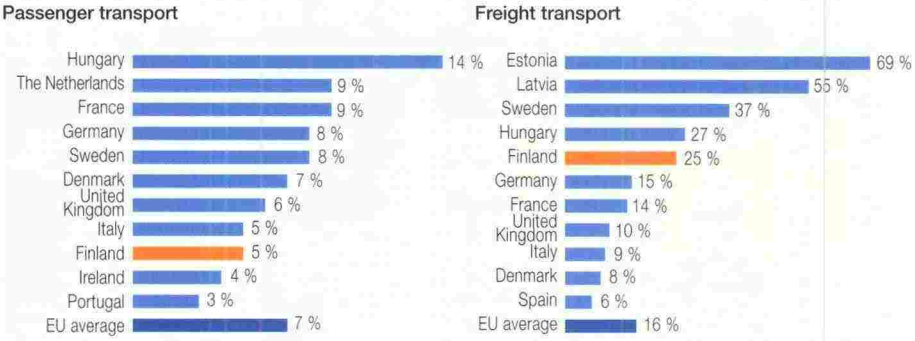
427 km
Time line for required investments 2010–2015



Tonne-km, million.



Rail traffic's share of passenger and freight transport in some EU countries



Traffic and Safety

Excellent punctuality, no serious rail accidents

In one of the most important success factor for rail transport, punctuality, objectives were exceeded in both commuter and long-distance traffic. The punctuality index was 98.7% in commuter traffic and 91.7% in long-distance traffic. This is excellent by international standards.

This kind of result can only be achieved through cooperation. The infrastructure manager's challenge is to see that track work, which takes place on lines that are kept open to traffic, goes according to plan and that safety equipment and other technical systems are reliable.

Traffic control in an important role

RHK is responsible for traffic control and related systems. Last year the automation of control proceeded according to plan, resulting in a steady decline in personnel required for control tasks by VR Limited, which supplies the service.

Late in the year traffic controllers received a new tool in the form of a new train monitoring system. The JUSE system monitors the flow of traffic throughout the rail network and allows controllers to anticipate disturbances and prevent repercussions. It also provides a better basis for passenger information.

Improving the quality of passenger information

Public address systems at stations have been inspected and defects have been corrected. The systematic renewal of ageing display boards has also begun.

The renewal of the passenger information system at the Tampere station proceeded smoothly and the new system went into operation at the beginning of 2005. Display boards were also installed in Toijala and Hämeenlinna, which did not have them before.

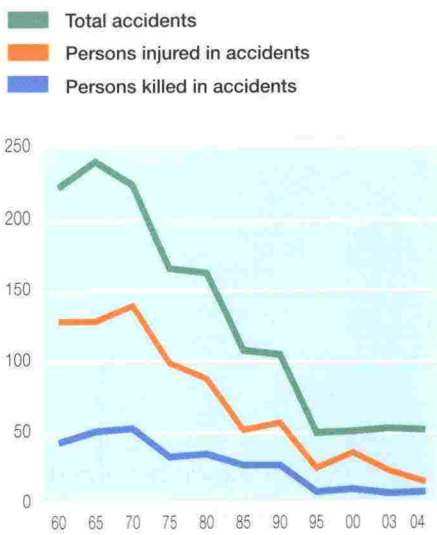
Technical progress to promote safety

With the development of traffic control and safety equipment, automatic train protection was expanded to additional line sections, most notably between Oulu and Rovaniemi. Automatic train protection will cover the entire network open to rail traffic by the end of 2006.

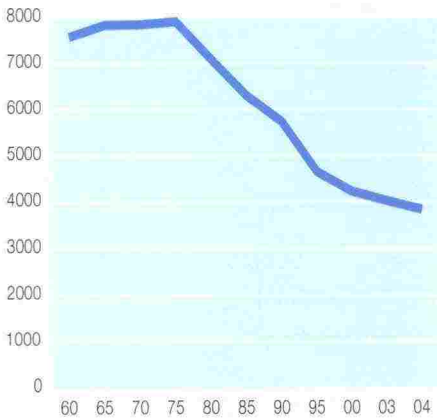
The rail operator has introduced new rolling stock and procurements are being made. RHK has approved a new type of car sleeper and made preparations for new railcars and sleeping coaches. The RAHKAT rolling stock inspection system has been in operation for a year and experience has been good. The purpose is to make sure that rolling stock is traffic-worthy and inspections are up to date.

A new line radio system was placed in trial operation in the Pieksämäki region. It will replace the old analog system used for communication between traffic controllers and train drivers. The new system is based on the European GSM-R standard and will be used in many ways to transfer safety information as well as voice. The system used for communication between traffic controllers and train drivers, which will ensure safe and efficient traffic, has been named RAILI.

Development of accidents at level crossings 1960–2004



Number of level crossings on state-owned lines 1960–2004



Regulations reformed

Rail safety regulations were reformed. A new Act containing qualifications for personnel in rail safety tasks was approved by Parliament late in the year. This Act came into force on 1 January 2005. Rail safety rules were also updated late in the year. The new rules will go into effect at the beginning of June 2005.

The Safety Directive that was approved by the EU last spring will guide activities in Finland as well. This Directive and the two Directives on interoperability have stimulated lively activity throughout Europe. This has included the development of safety management systems, the preparation of technical specifications for interoperability and other standardization work.

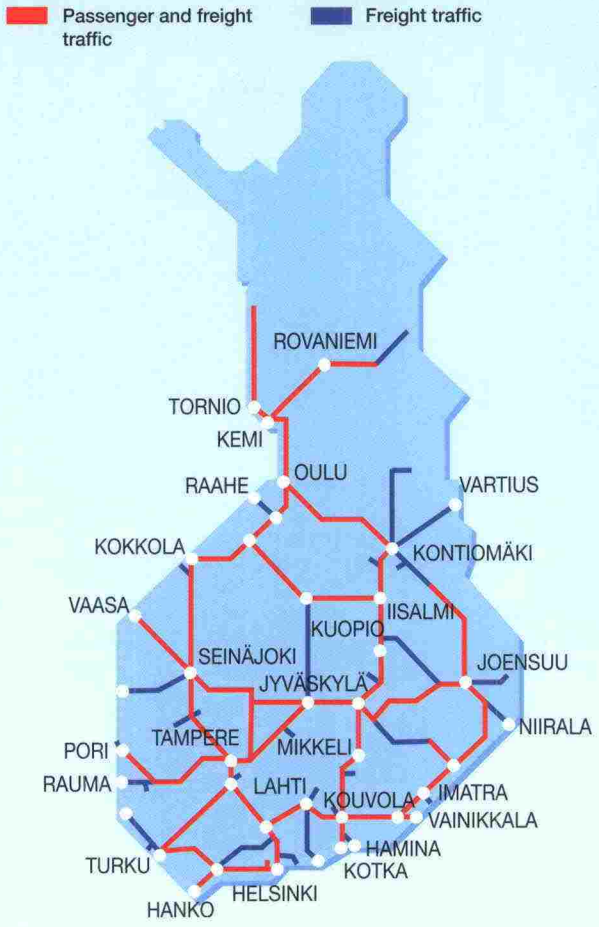
European cooperation

Actively participating in European cooperation allows RHK to learn how things are done elsewhere, represent Finland's interests and keep rail safety in Finland at a high European level. The first parts of the technical specifications for interoperability were approved in the autumn. The European Railway Agency was established and each member state is required to establish its own national safety authority. Finland's rail safety authority will go into operation in autumn 2006.

In 2004 other operators were allowed for the first time to use the rail network without having to obtain permission from VR. Traffic in connection with track work and museum traffic became possible under new legislation. Operators must receive a safety certificate from RHK, have a contract to use the rail network and apply for rail capacity. Two firms engaged in track work and five firms operating museum traffic had safety certificates.

Rail traffic network

31.12.2004



Safety equipment systems

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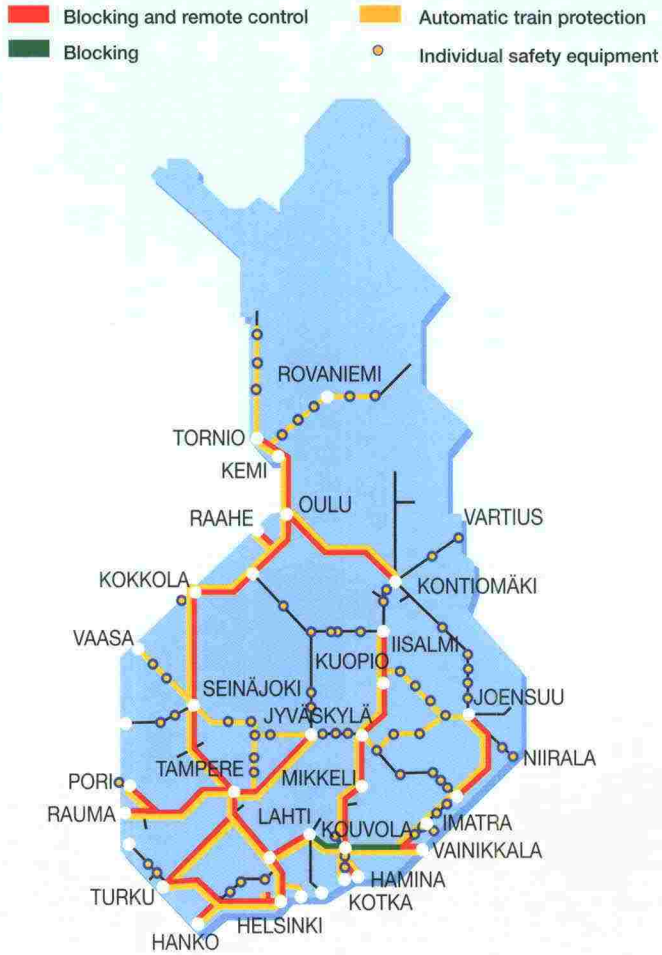
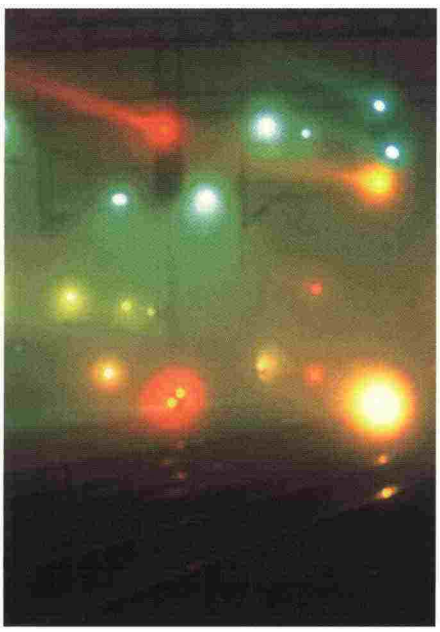


Greatest risk at level crossings

Safety objectives were achieved with the exception of safety at level crossings. Thanks to technical solutions, competent personnel and the right attitude, no major accidents occurred in rail traffic last year. As in previous years the number of accidents at level crossings remained high, however, with serious consequences.

A total of 52 accidents occurred at level crossings, including 14 accidents on industrial sidings. As a result 8 people died and 15 were injured. Typically, nearly all these accidents were on line sections with low traffic volumes. The worst accident occurred in January between Tornio and Kolari and claimed four lives. In nine cases cars crashed into the side of a train.

Last year acts of vandalism, such as placing rocks on rails or throwing stones at trains, were a bigger problem than usual. To reduce vandalism, track surveillance has been stepped up.



Better security in station areas

In recent years RHK has worked hard to improve passenger safety in station areas. Surveillance cameras have been installed at stations during the construction of urban lines in the Helsinki region. Practically every busy station is now equipped with them.

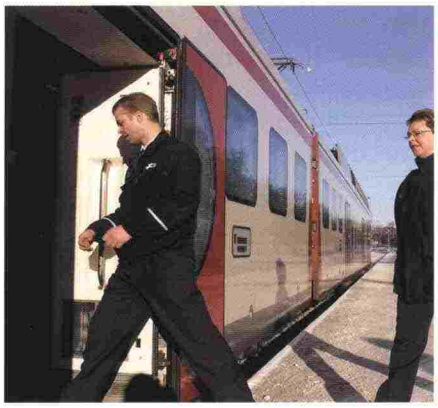
RHK and the rail operator have also taken steps to increase physical security. Having security guards around makes people feel safer and helps prevent vandalism. In improving safety in station areas, attention has now been turned to coordinating surveillance in order to improve effectiveness and cut costs.

Ticket inspections

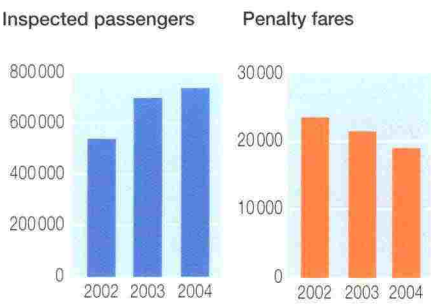
RHK inspects passengers' tickets throughout the rail network. The purpose is to keep unticketed passengers to a minimum so as to improve the profitability of rail services and hold ticket prices down. In 2004 ticket inspections increased significantly in long-distance traffic.

RHK employed 31 ticket inspectors plus 6 office employees. A total of 610,000 passengers were inspected in commuter traffic and 130,000 in long-distance traffic. This was an increase of 5,000 passengers in commuter traffic and 25,000 in long-distance traffic compared with the year before. In commuter traffic 65% of inspections were in the Helsinki metropolitan area and 35% were in areas for which VR is responsible.

The portion of unticketed passengers was reduced to 3.1% in 2004, compared with 4.6% in 2002 and 3.5% in 2003. Inspectors issued 19,000 penalty fares and over 70% of these were collected.



Ticket inspection



Environmental Matters

Emphasis on environmental management

Developing RHK's operational system has also meant reassessing environmental matters and developing a new environmental system. Last year an audit of environmental systems in the Ministry of Transport and Communications' administrative sector was completed and as a result of this audit RHK reshaped its environmental policies. In the future RHK's environmental activities will be guided by the Ministry of Transport and Communications' third environmental programme, work on which began in autumn 2004.

National objectives for reducing noise and vibration

Noise control work is now based on an action programme to reduce noise and vibration that was completed in April 2004 and extends up to 2020. RHK has already implemented its part of the programme particularly in the Helsinki region. The construction of extensive noise barriers will be completed in 2005.

The European Commission will require detailed noise reports from Finland beginning in 2007. To minimize transport noise and make sure that information is up to date, the Melutta project was established with the Ministry of the Environment as the coordinating body.

Reducing vibration is also one of the most significant environmental challenges facing RHK in the future. Work will be based on a recommendation for measuring and classifying traffic vibration that was prepared by the Technical Research Centre of Finland in autumn 2004.

Track environment improved

Work began in autumn 2004 on a master plan for upgrading the Seinäjoki–Oulu line section together with a broad environmental impact assessment. The line section is over 300 km long, so this work is very demanding.

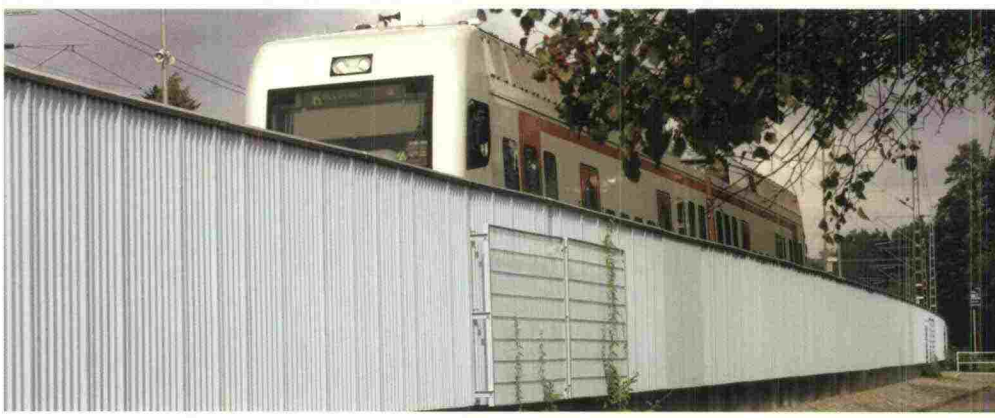
The track environment project in the Lahti region reached the implementation stage. The goal is to take measures with EU support to reduce noise and vibration, clean up soil and groundwater and improve the landscape in the track environment in the Lahti region.

Soil and groundwater clean-ups were carried out in the Lielahti section of Tampere and the Hakkila section of Vantaa. A study concerning the risks to groundwater of a decommissioned sleeper treatment plant in the Pursiala section of Mikkeli was completed before the start of the pilot tests that are necessary before clean-up work can start.

Well-maintained station areas improve competitiveness

Station areas that are carefully designed and properly maintained are an essential part of competitiveness for rail services and public transport in general. As a result of the construction of urban lines many stations in the Helsinki region have been given a face-lift. Stations owned by RHK have also been given annual repairs. The annual repair programme focused on painting exteriors last year.

With the automation of traffic control, some station buildings are no longer needed particularly in eastern and northern Finland. This has also meant the closure of heated waiting rooms, since facilities that are not guarded suffer from constant vandalism. In such cases station areas have been improved by building shelters on platforms that blend in well with their surroundings.



Track Maintenance

Expansion of tendering to track mainenance

Tendering in the field of infrastructure management was expanded to track maintenance and operation. Specific jobs have been commissioned on the basis of tenders for years.

Last year tenders were invited for track maintenance in three areas in northern Finland, including permanent way, safety equipment, electrification and real estate. The selection of contractors took place in early 2005. The track maintenance agreement with VR-Track Ltd was revised in autumn 2004 so that the areas where tenders were invited in northern Finland will be excluded from the agreement in July 2005.

Tendering is also associated with a new regional management model that was introduced at the beginning of 2004 in northern Finland. Its main task is to represent RHK's interests in contracting and other work in the region.

Infrastructure management system under development

RHK began developing its infrastructure management system last year. Register and service agreements were revised and the principles for developing registers and databases were defined. Work focused on surveying problems and recommending solutions to them and on creating a vision for RHK's infrastructure management system.

In formulating its IT strategy, close attention was paid to information concerning the rail network and its current state and how information can be utilized. The IT strategy will help guide the future development of infrastructure management.

Inspection database will improve track maintenance

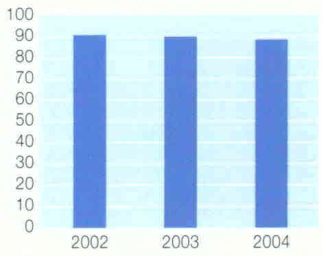
Good progress was made in developing a new track maintenance wagon and a track inspection database. The track lengths and locations of switches in the database were verified and now all electrified line sections can be inspected using the database, without extra work to speak of. The inspection of track lengths and switch locations will continue on line sections that have not been electrified.

The distribution of track inspection results takes place online. Results are generally available to track maintenance personnel, for example, the day after measurements are made. Easy access to track inspection results improves the effectiveness and targeting of maintenance work.

RHK completed a comprehensive schematics project late in the year. The schematics cover yard functions as well

Geometric condition of the rail network (condition index)

The condition index each year is calculated on the basis of spring measurements as a four-year sliding average. (Spring measurements indicate the geometric condition level.)



The condition index's maximum value is 100%, in which case the rail network has met geometric condition requirements completely.

as purely technical aspects of the rail network. They show the nature and location of tracks, switches, safety equipment and electrification equipment, speed limits, axle weights, passenger platforms and loading platforms. The schematics are important for traffic control as well as infrastructure management.

Profitability of real estate activities a concern

When the Finnish Rail Administration was established in 1995, it was left in charge of over 4,000 buildings that had belonged to the Finnish State Railways. Most of these had already been diverted from railway use by this time. Buildings have often been hard to rent because of their location and poor condition. RHK has had to renovate buildings – many of which have protected status – without any possibility of recouping renovation costs in the form of rent. Furthermore, numerous buildings that have not been diverted from railway use now stand empty because of streamlining in the rail sector.

Devising a real estate strategy

The financial objective for RHK's real estate activities is to cover annual expenses incurred in activities – including renovation – with income from real estate and to increase the surplus available for capital costs significantly. In autumn 2004 RHK began preparing a real estate strategy to help plan measures in this area.

In 2004 the buildings under RHK's control were divided into categories according to their commercial viability. Buildings operating on commercial principles are expected to yield rents exceeding annual expenses incurred in activities. Other buildings will be maintained at a loss. Rents from land areas are expected to produce a reasonable surplus.

Rail-grinding and inspection

In August–October a heavy Swiss rail-grinding train with 40 stones operated on all the lines between Helsinki and Tikkurila and the urban line between Tikkurila and Kerava as well as the Kouvola–Pieksämäki and Toijala–Loimaa line sections.

Long-welded tracks on main lines were also inspected in the late summer with the help of an ultrasound inspection wagon, in addition to conventional methods.

Good indicators for summer track work

The geometric maintenance of the rail network went well last year. The indicator obtained from track measurements in autumn 2004, the geometric condition level, was 97%, compared with 94% in autumn 2003. The length of track in unsatisfactory condition was reduced to just 1% of the rail network – the lowest figure ever achieved in Finland. Furthermore, the portion of track in excellent condition rose to 39%. These good results can be attributed to the large-scale replacement of sleepers, among other things.

The rail network condition index, which is the average of spring measurements over a four-year period, nevertheless declined slightly. This was due to the effects of difficult winter conditions in spring 2003, which were reflected in measurement results.

Line sections with low traffic volumes closed

The length of tracks in service has shrunk by 109 km. The line section Pesiökylä–Taivalkoski (82 km) was closed on 1 July 2004. Commercial traffic had not operated on this line section since 2002. Daily maintenance ended but infrastructure will not be dismantled. The line sections Kolari–Äkäsjoki (17 km) and Niesa–Rautuvaara (10 km) were closed on 1 September 2004.

Track Renewal

Clear improvement in rail network condition, but work is not over

Emphasis has been systematically placed on track renewal. As a result the length of tracks under speed restrictions was kept at the previous year's level. At the end of the year there were speed restrictions on 300 kilometres of track. The supplementary budgets received during the year made it possible to prevent an increase in restrictions.

The 2004 budget included only €106 million for track renewal, but thanks to track renewal funds left over from 2003 and supplementary budget funds, over €170 million was available for replacement investments during the year. RHK did not have time to use all the funds that were appropriated in the autumn, however.

Around 420,000 wooden sleepers were replaced with concrete sleepers in different parts of the country. This corresponds to about 255 kilometres of track. Rails were replaced on 140 kilometres of track and 60 new switches were installed. Ballast was cleaned on 49 kilometres of track.

Renewal of superstructures and yards

The most significant track renewal projects last year were on the Seinäjoki–Oulu, Kokemäki–Rauma, Luumäki–Lappeenranta, Pieksämäki–Kuopio, Viinijärvi–Siilinjärvi and Rovaniemi–Misi line sections. Work focused mainly on the renewal of superstructures, i.e. sleepers, rails and ballast. Track renewal was completed for the most part on the Kokemäki–Rauma, Luumäki–Lappeenranta and Rovaniemi–Misi line sections. The finishing touches still have to be made.

The biggest challenge in the near future is the renewal of the Seinäjoki–Oulu line section, which is very busy and has only one track.

Renewing yards is an important part of improving the efficiency of the rail network. The most significant yard renewal project in 2003 was conducted in the Oulu freight yard. Yard improvements were also made in Kemi, Rovaniemi, Kalvitsa and Otava. New passing tracks went into operation in Torkkeli and Länkipohja last year.

Although the condition of the rail network has clearly improved in recent years, renewal work has not been completed. To prevent problems from piling up, replacement investments amounting to €170 million a year are required for several more years.

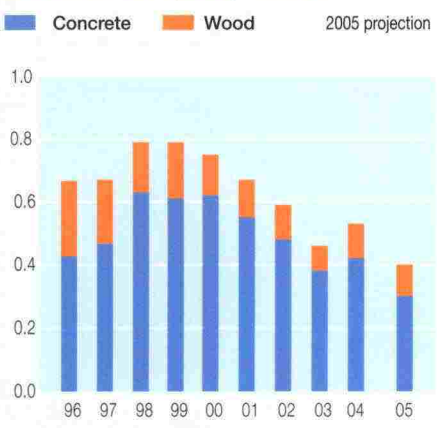
Good planning makes for smooth traffic flows

Most track renewal projects are carried out on lines that are kept open to traffic. This requires the careful planning and scheduling of work in order to minimize traffic disruptions. The planning and monitoring of work can substantially influence traffic efficiency and punctuality.

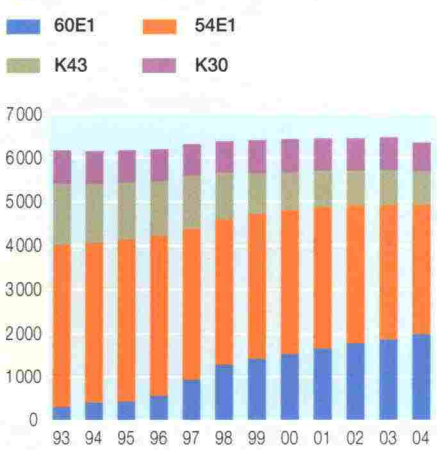
In some cases interruptions in rail services have been arranged and normal rail traffic has been handled by other means. This has made it possible to complete work more quickly and efficiently. Such a procedure was followed on the Luumäki–Joensuu, Tampere–Jyväskylä, Kokemäki–Rauma ja Oulu–Rovaniemi line sections in 2003.

The additional funds in the spring and autumn supplementary budgets were indispensable to finance track renewal. It would be better from the viewpoint of economical construction for the amount of funding available for infrastructure management each year to be ensured in connection with the annual budget. In this case work could be conducted in sufficient stretches that have been taken into consideration in planning rail traffic timetables.

Installed sleepers, million



Types of rail on main lines, track-km



Increased efficiency through competition

Over half of infrastructure investments are presently put out to tender and in new projects, such as the direct line from Kerava to Lahti, practically all work is put out to tender. RHK purchases strategic track materials such as rails, switches, and concrete and wooden sleepers on the basis of multi-year contracts, which allow suppliers to keep production steady while holding down costs.

The market in track construction and maintenance is undeveloped at the moment, however. Work involving special equipment and expertise has been ordered from VR-Track Ltd on the basis of an annual agreement.

RHK has taken steps to increase competition in track maintenance. In 2004 tenders were invited for a five-year framework agreement covering infrastructure replacement and maintenance investments. The contract was won by VR-Track Ltd.

In many projects RHK makes use of project management consultants. This operating model is now being applied in track renewal between Kouvola and Pieksämäki, line electrification and related track work in northern Finland, superstructure work between Tampere and Jyväskylä, the Kerava–Lahti direct line project, the construction of the Kerava urban line, the renewal of the Karelian line and some maintenance projects.

RHK has invited tenders for safety equipment and electrification work for many years.

Investments in traffic control

A new traffic control and safety system for the Oulu–Tornio line section went into operation last year. The modernization of remote control in northern Finland proceeded on the Ylivieska–Oulu and Kontiomäki–Oulu line sections.

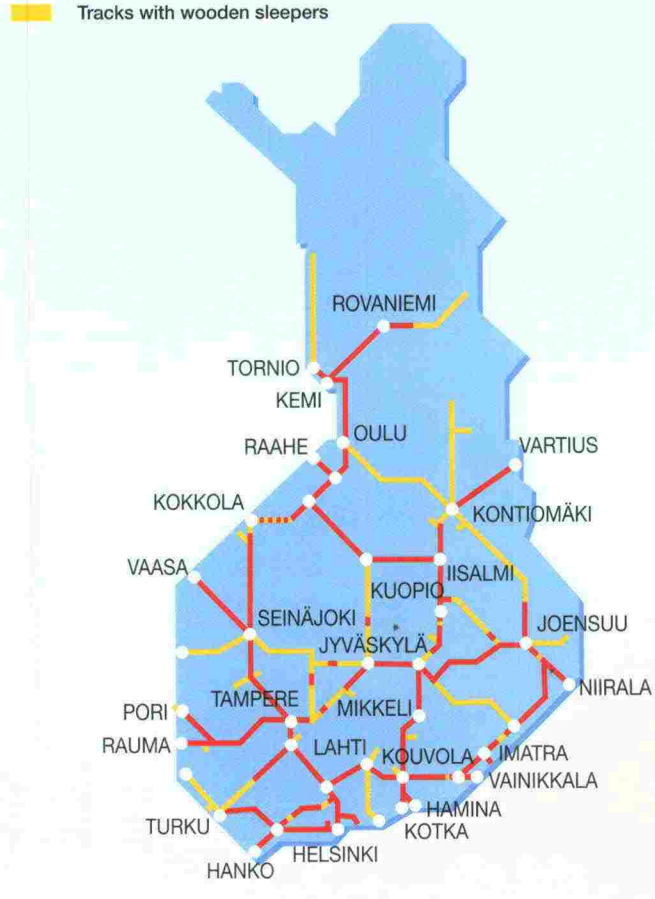
Expanded signalling boxes went into operation in Sköldvik, with remote control from Helsinki.

Age of superstructure in the rail network

31.12.2004

Tracks with concrete and wooden sleepers

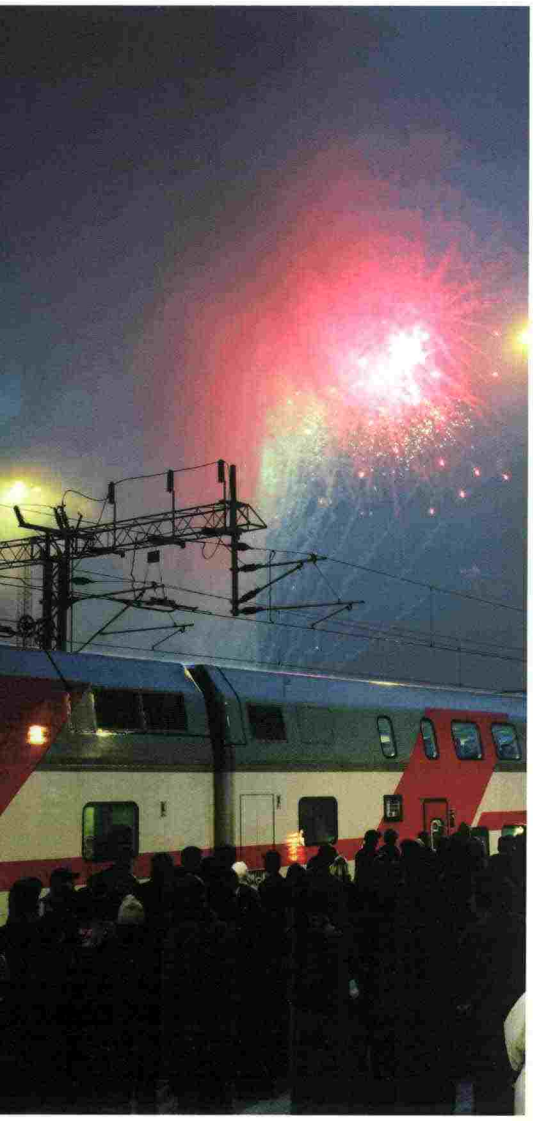
31.12.2004



Improving Traffic Conditions

Kerava urban line and electrification between Oulu and Rovaniemi completed

Among large development projects the Kerava urban line and the electrification of the Oulu–Rovaniemi line section were completed last year. New development projects were not started. Work proceeded on the direct line between Kerava and Lahti, the electrification of the Oulu–Kontiomäki–Vartius line section and the construction of automatic train protection equipment and the pilot stage of the GSM-R line radio system.



Kerava urban line opened to traffic

Construction of the Kerava urban line was completed last year. The urban line went into operation in August 2004.

The completion of the urban line made it possible to increase commuter services; the line's two easternmost tracks are reserved for commuter traffic. The urban line allows services at 10-minute intervals in the best case.

The extension of the urban line from Tikkurila to Kerava was a joint project conducted by RHK and the cities of Vantaa and Kerava which will also promote the development of land use along the line.

Electrified services to Rovaniemi

The focus of line electrification is in northern Finland. Electrification was completed between Oulu and Rovaniemi last year. This line section was opened to electrified services in December 2004 and the event was marked by a celebration in Rovaniemi, complete with fireworks.

Work is also under way on the Oulu-Kontiomäki–Vartius and Kontiomäki–Iisalmi line sections, with electrification scheduled for completion in 2006.

Further electrification of the rail network is sosio-economically feasible and will improve preconditions for rail traffic. It is also a significant environmental investment.

In connection with electrification, other improvements are made, such as strengthening superstructures and improving yards.

Work on direct line in full swing

Construction of the direct line from Kerava to Lahti proceeded according to objectives. The completion of the earthmoving and bridge contracts between Mäntsälä and Hakosilta (eight in all) meant that rail laying can start. Earthmoving and bridge construction got under way between Kerava and Mäntsälä. Electrification work also got off to a good start.

To build the direct line RHK has been assisted by a project management consultant, which selects contractors on the basis of tenders. Contractors conclude agreements directly with RHK, however. The project is so large that it has been divided into sub-projects. Tendering and careful planning have resulted in cost savings, making it easier to stay within tight finances even though the cost level has risen considerably.

Direct line will bring many benefits

The construction of the direct line is quite a unique project. The last time such a direct line was built in Finland was in the 1970s, between Jämsänkoski and Jyväskylä.

The direct line from Kerava to Lahti will allow the development of passenger and freight services to eastern Finland and Russia. It will also free capacity on the main line from Helsinki for possible new services.

The direct line is intended for high-speed passenger traffic and freight traffic and will be double-track, electrified and equipped with automatic train protection. It will have no level crossings. The direct line will be in the same corridor as the Lahti motorway for the most part, thus limiting the

impact on the environment. The direct line will have a total length of 74 km, including 63 km of new track. The direct line will be completed in autumn 2006.

Construction of automatic train protection equipment

The expansion of automatic train protection continued. Last year ATP went into operation on the Laurila–Rovaniemi, Rovaniemi–Kemijärvi, Laurila–Tornio, Oulu–Laurila and Orivesi–Haapamäki line sections. These have a total length of 394 km. At the end of the year Finland had 3,651 km of tracks in the ATP system. The goal is for the system to cover all lines used for passenger traffic and other lines that are important for freight traffic by the end of 2006.

Automatic train protection ensures that trains comply with speed limits. If a train goes too fast, the system automatically applies the brakes or even stops the train.

New line radio system in the pilot stage

The construction of a new line radio system according to the GSM-R standard continued last year, and after the pilot stage of the network was approved, expansion was set to begin.

The GSM-R network has been named RAILI, which is short for Railay Integrated Line Communications System. It will broadly serve communications needs in the rail environment, thereby ensuring safe and efficient traffic. The Raili system will mainly serve traffic controllers and drivers and will provide a communications platform in future European Train Control System (ETCS) and data applications.

GSM-R technology will replace the old analog systems which are now in use with a comprehensive speech and data infrastructure. RHK has ordered the infrastructure for the GSM-R network as well as terminals from Siemens. The contract covers about 5,000 kilometres of tracks and yards in the network. It also includes installation, support and maintenance services for a period of 15 years. RHK has selected Corenet Ltd. to operate the GSM-R network.

The GSM-R network will be built in stages to its planned scope.

Electrification of the rail network

31.12.2004

Increasing the capacity to plan new projects

The development investments that are now under way in the rail network will come to an end in 2006. Future projects include the airport line in the Helsinki region, but there is also a lot that needs to be improved in the present rail network to ensure efficient traffic and Finland's competitiveness. For example, rail capacity must be increased, since capacity on the busiest line sections is not sufficient to meet transport demand.

The biggest challenges are the Ilmala yard and the Seinäjoki–Oulu and Lahti–Vainikkala line sections. As part of the latest collective bargaining round, the Government resolved in November 2004 to include these in an action programme intended to support the incomes policy agreement in the coming years. The Government resolution calls for projects to begin in 2007.

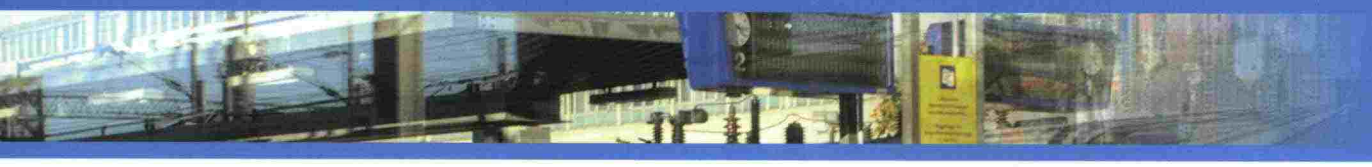
Increasing the capacity to plan new development projects is important. Last year RHK worked on a master plan for the Ilmala yard and a tentative master plan for the Seinäjoki–Oulu line section. A master plan for the Lahti–Vainikkala project was completed in spring 2004. Possibilities to finance the project with a private-public partnership (PPP) model will be explored.

Preparing the new Track Act

Work began last year on a new Track Act. On 16 February 2004 the Ministry of Transport and Communications established a working group to draft legislation concerning track planning, land purchasing and construction. The members of the working group are from the Ministry of Transport and Communications, RHK, the Finnish Road Administration, the Association of Finnish Local and Regional Authorities and the Ministry of the Environment. The working group's mandate extends up to 31 August 2005.

Research and Development

Broad research the basis for development



RHK's research and development work mainly involves practical research and the development of guidelines and methods related to infrastructure management. In recent years R&D has focused on improving the competitiveness of rail transport, the condition and development of the rail network and improving safety.

Rail Transport 2025 looks far ahead

RHK's first long-term development plan, Rail Network 2020, was published in 2001. Last year RHK began a revision of this plan under the title "Rail Transport 2025". This will update RHK's proposal concerning infrastructure management priorities, costs and impacts up to 2025. Rail Transport 2025 will serve as an important tool in operational and financial planning and other strategy work.

Station development needs in long-distance traffic assessed

Last year RHK surveyed the present service level at key stations in long-distance traffic along with development needs from the viewpoint of passengers. Proposals for improvements concern accessibility, shelters, passenger information, clarifying ownership relations between different actors and expanding cooperation.

Leppävaara urban line increases passengers

The effects of the Leppävaara urban line on traffic were the subject of a study commissioned by the Helsinki Metropolitan Area Council, the Ministry of Transport and Communications, the City of Espoo and RHK. More frequent services have increased the number of passengers along the urban line and also the Martinlaakso line. Public transport's modal share has not risen when it comes to journeys to and from the centre of Helsinki, however. Passengers have been satisfied with the urban line and consider connections good. A similar before and after study is in progress with regard to the Kerava urban line and the direct line from Kerava to Lahti.

Improving investment management

Research projects concerning investment management will enhance RHK's possibilities to contract work in an efficient and cost-conscious way and will allow better project management and broader competition.

RHK continued cost management work by participating in the Infrastructure Cost Management project (IK project) and also commissioned a study of cost management in replacement investments. RHK has likewise taken an active part in preparing nomenclatures and quality requirements in the infrastructure field.

Technical research revolving around systems and structures

Technical R&D improves the competitiveness of the rail network and lowers unit costs. In 2004 technical research revolved around future traffic control systems, embankment structures and reducing environmental impacts in the rail sector.

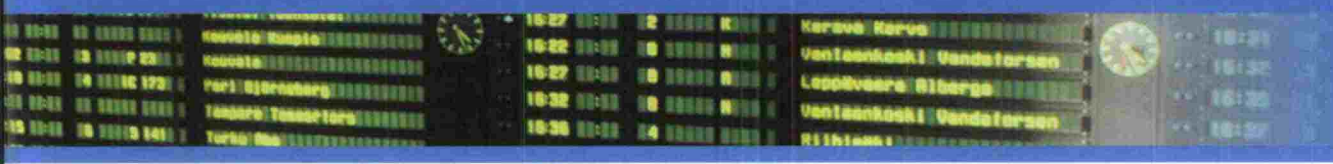
The European Technical Specifications for Interoperability (TSIs) will have a significant influence on railway standards in Finland.

Last year the EU committee responsible for interoperability and safety adopted the first four specifications for the interoperability of the conventional rail system. These concern noise, telematic applications for freight services, freight wagons and safety equipment. These will be implemented in Finland in 2005.

RHK has continued to place strong emphasis in research and development work on reducing noise and vibration caused by rail traffic.

IT Management

IT strategy completed



The task of IT Management is to support RHK in managing, developing and maintaining rail infrastructure and rail traffic with the help of reliable and up-to-date information and efficient information systems. Information resources concerning rail infrastructure and rail traffic are increasingly a strategic success factor for RHK.

In autumn 2004 an IT strategy was prepared for RHK. Since administrative information systems will be arranged in future under the state's centralized IT management, the strategy focused on RHK's production information systems. These systems cover the planning, construction and maintenance of rail assets, the managing of rail traffic and the allocation of rail capacity.

The strategy calls RHK's to have top European expertise in IT management applying to rail infrastructure and rail traffic. This vision will be achieved with the help of the following strategic goals:

1. RHK will take control of key data resources during the strategy period.
2. RHK will construct information systems utilizing rail data to assist units in their activities.
3. RHK will create a system architecture that minimizes overlap.
4. RHK will centralize IT management authority and introduce a strategic management process.

From strategy to practical application

Strategy work continued with the start of the following projects: preparation of the information architecture, preliminary study of positioning services, preliminary study of rail data services and preliminary study of document management. With the help of these projects RHK will begin preparing the overall architecture, taking control of rail data and constructing key information systems utilizing rail data. Supervision will also be made more efficient.

IT Management resources will be focused on developing and supporting information systems that serve rail infrastructure and rail traffic by outsourcing basic IT services.

Financial administration towards paperless accounting

In financial administration the goal is to shift gradually to paperless accounting. Last year RHK began introducing the Rondo and Travel systems. These cover the electronic recycling of purchasing and travel invoices and the filing of receipts and other accounting materials. The systems were purchased as a joint procurement and operate on service centre hardware.

In autumn 2004 RHK also acquired a system for financial reporting. Financial information is gradually being transferred from the accounting system to this system, which is named Cognos.

New office system

In summer 2004 RHK made the shift to Microsoft Office 2003. The new system harmonized word processing, spreadsheet, e-mail and browser software. Extensive training was arranged during the transition.

The new e-mail system allows distance work and joint calendars. The renewal of workstations continued so that all the old computers have been replaced and all personnel now use new Windows XP workstations.

New train monitoring system

The JUSE train monitoring system went into operation in November 2004. The system produces information on the flow of all rail traffic practically in real time. It is part of the Ministry of Transport and Communications' Passenger Traffic Information Programme, which promotes cooperation aimed at providing information services for passengers and minimizing disturbances in public transport.

Personnel

Personnel resources and expertise strengthened

RHK is responsible for meeting the challenges of its infrastructure management and development tasks with a small but expert team. Personnel and expertise must be kept at the right level and RHK must ensure the long-term development of expertise as well as employees' well-being.

Additional posts

RHK's Management Group took a critical look at personnel resources last year and came to the conclusion that new challenges could not be met without additional employees. It approved the establishment of 11 new posts and discussed a further increase of similar size in the coming years.

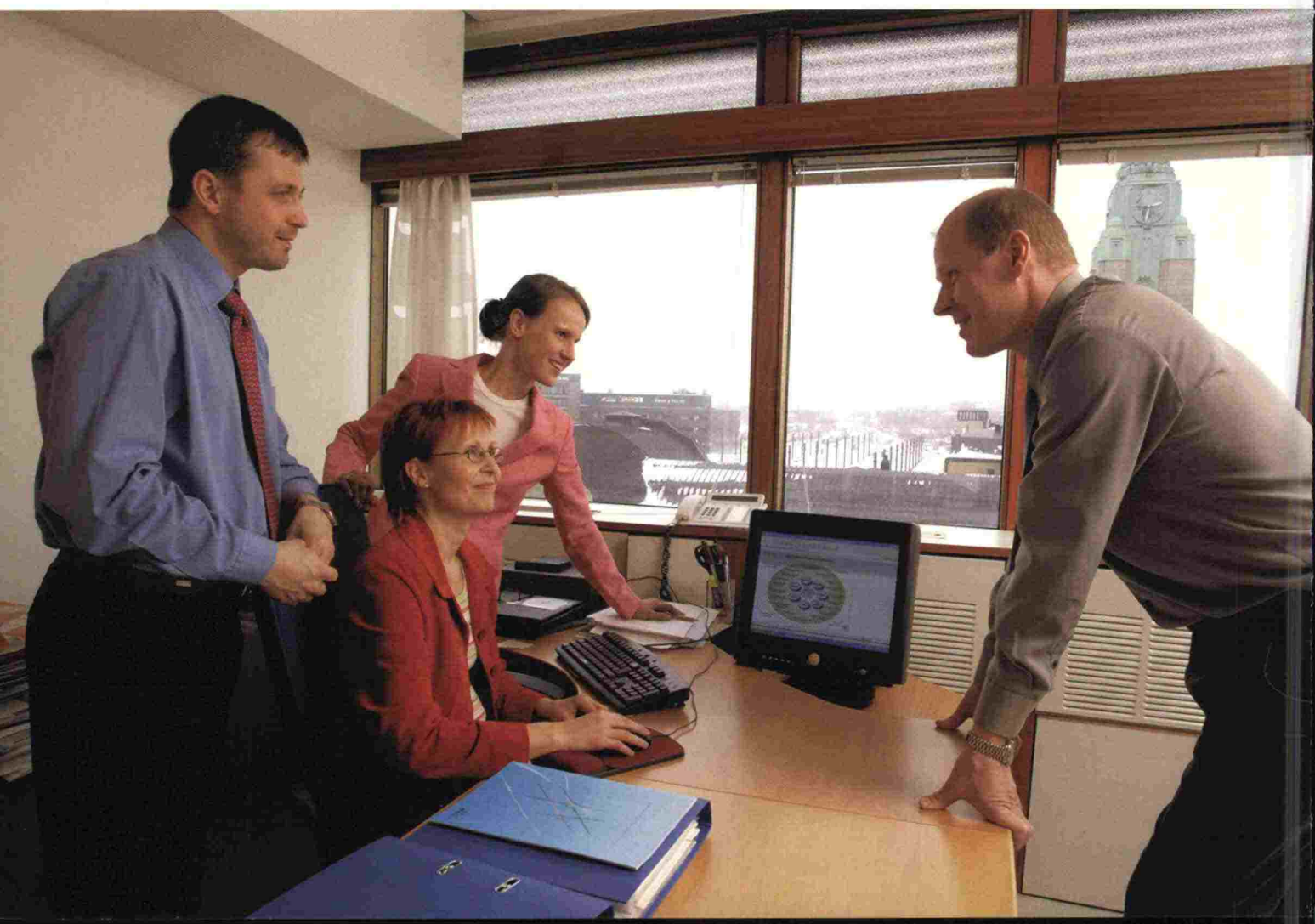
Most of the new posts were filled in autumn 2004 and hiring continued in early 2005. Additional employees have been recruited for planning, project management, planning and directing maintenance, IT management and communications.

With its increased resources RHK had to resolve the problem of space. It managed to acquire facilities one floor up at its Kaivokatu headquarters.

New pay system introduced

RHK's new pay system went into operation on 1 June 2004, after more than two years of preparation. This resulted in a solution that was endorsed by employees' representatives and the employer and approved by the main negotiating parties.

The system complies with the national recommendation. Pay is based on the evaluation of job requirements and personal performance. The new system puts RHK in a good position to compete for employees and reward employees for more difficult tasks and better performance.



Job satisfaction down somewhat

After rising for two years, job satisfaction took a slight turn for the worse last year. This finding is cause for concern but is only natural since RHK was busy preparing for its a new operational system and reorganization. These development projects present answers to the findings in previous surveys, which have been discussed together with personnel.

RHK will continue to develop management, procedures and expertise, and this will also help it achieve better results in the area of job satisfaction.

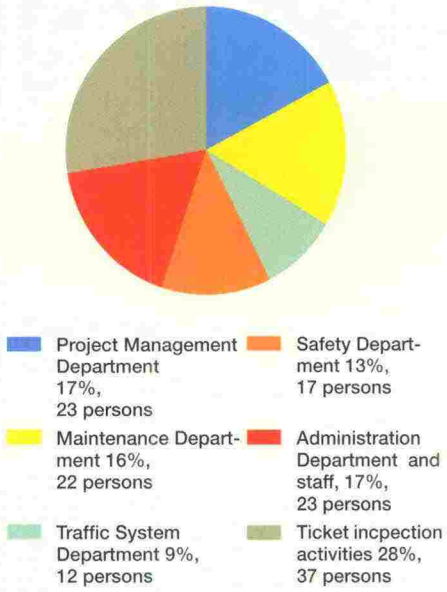
Cooperation with employees

Activities in accordance with the Act on Cooperation within Undertakings were firmly established. During the year development projects and other matters affecting personnel were discussed with managers and employees' representatives.

Training and recreation

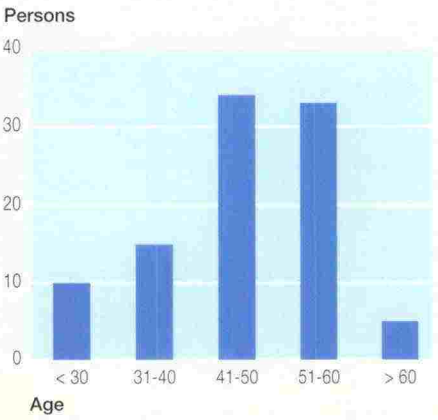
Personnel development continued with the arranging of outside training as well as computer instruction for all personnel. Leisure activities were also arranged for employees and support was provided for sports activities.

Person-years by type of activity 2004

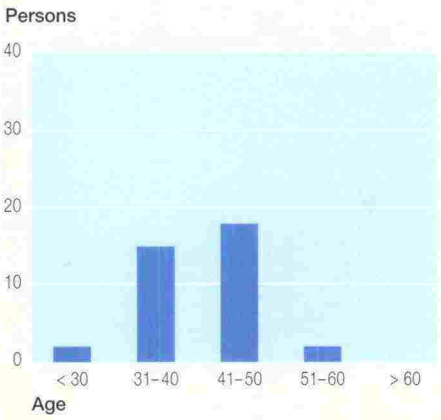


Age breakdown of employees

Employees in actual activities



Employees in ticket inspection activities



Performance Objectives

The performance objectives which the Ministry of Transport and Communications set for the Finnish Rail Administration in 2004 were achieved as follows (objective in italics):

SCOPE OF THE RAIL NETWORK AND LEVEL OF SERVICE

No changes will be made in the scope of the rail network.

No changes were made in the scope of the rail network.

The line section Pesiökylä-Taivalkoski (82 km) was closed on 1 July 2004. Commercial traffic had not operated on this line section since 2002. Daily maintenance ended but infrastructure will not be dismantled. The line sections Kolari–Äkäsjoki (17 km) and Niesa–Rautuvaara (10 km) were closed on 1 September 2004. The length of tracks in service has consequently shrunk by 109 km.

Traffic delays

Delays lasting over 5 minutes due to track maintenance will not affect more than 6% of passenger trains.

Delays affected 3.3% of passenger trains. The reason for this good result is that delays caused by track work (25,650 minutes) were substantially lower than the target (38,100 minutes). However, delays caused by malfunctions in safety equipment (31,432 minutes) exceeded the target (20,030 minutes). Track work was clearly more difficult from a traffic viewpoint last year than in 2003.

Rail network service classes

Passenger traffic				Freight trafic			
Servise class	Maximum speed	Track-kilometres		Service class	Maximum axle weight and speed	Track-kilometres	
		Objective	2004			Objective	2003
H1	Over 140 km/h	556	530	T1	25 t and 60–100 km/h	115	115
H2	130–140 km/h	1,270	1,334	T2	22.5 t and 100 km/h	3,809	3,836
H3	110–120 km/h	1,562	1,524	T3	22.5 t and 50–80 km/h	1,078	1,051
H4	100 km/h or under	593	593	T4	20 t and 40 km/h	638	638
H5	No regular passenger traffic	1,659	1,659				
Total		5,640	5,640			5,640	5,640

Deviations from service classes:
Passenger traffic
The Kerava–Pasila line section (26 km) was not shifted from service class H2 to class H1 until January 2005, when the Tikkurila–Kerava urban line was completed.
The Lappeenranta–Imatra line section (38 km) was shifted from service class H3 to class H2.
Freight traffic
The Ylivieska–Iisalmi line section (27 km) was shifted from service class T3 to class T2

Rail network condition index

The rail network condition index is calculated on the basis of the geometric condition level in relation to track-kilometres according to service class. The condition index's maximum value is 100. The condition index is calculated as a four-year sliding average. The objective for 2001–2005 is 89%.

The geometric maintenance of the rail network went well last year. The indicator obtained from track measurements in autumn 2004, the geometric condition level, was 97%, compared with 94% in autumn 2003. The length of track in unsatisfactory condition was reduced to just 1% of the rail network – the lowest figure ever achieved in Finland. Furthermore, the portion of track in excellent condition rose to 39%. These good results can be attributed to the large-scale replacement of sleepers, among other things.

The rail network condition index, which is the average of spring measurements over a four-year period, nevertheless declined

slightly. This was due to the effects of difficult winter conditions in spring 2003, which were reflected in measurement results.

IMPROVING SAFETY

Accident fatalities

No fatalities will occur in passenger traffic accidents.

No passengers were killed in passenger traffic accidents.

Accidents at level crossings

The number of accidents at level crossings will not exceed 40, including a maximum of 30 in the state rail network and 10 on private lines. Accidents at level crossings will be reduced with the help of different safety measures so that the number of accidents in 2010 will not exceed 30.

The objective was not achieved. Last year 52 accidents took place at level crossings, including 34 in the state rail network and 18 on private lines. As a result 8 people died and 15 were injured. Typically, nearly all these accidents were on line sections with low traffic volumes. The worst accident occurred in January between Tornio and Kolari and claimed four lives. In nine cases cars crashed into the side of a train.

Accidents due to permanent way

The number of accidents due to permanent way will not exceed five.

One derailing occurred in 2004. There were no other accidents due to permanent way in rail traffic last year.

A shunting locomotive derailed in the Kokkola yard because of track widening. Maintenance work was under way in the yard.

ECONOMY OF INFRASTRUCTURE MANAGEMENT

Unit costs in maintenance will decline by 2%.

Unit costs in the maintenance contract declined by 2%.

REAL ESTATE

Income from real estate activities will cover annual expenses for maintenance and 43% of capital costs.

The objective was achieved. Income from real estate activities exceeded annual expenses for maintenance and 52% of capital costs. The operational surplus after separate expenses was €2.7 million, the operational deficit after total expenses was €2.2 million.

RHK will study how real estate can be transferred to Senate Properties or some other organization that manages state-owned real estate.

Work is still in progress. RHK's real estate strategy will be drafted in spring 2005.

DEVELOPMENT OBJECTIVES

RHK will prepare for the new official tasks assigned to it in new legislation and for the gradual and controlled opening of rail traffic to competition in cooperation with the Ministry of Transport and Communications.

In matters regarding the operational system, rules and permits, consideration was given to the provision of rail services by other undertakings besides VR Limited. RHK has prepared a network description, capacity allocation procedures and a system for concluding contracts with rail operators.

Preparations were also made for the new railway safety authority:

- The need for a location study was examined in accordance with the Act on Authority to Locate State Units and Functions (362/2002).
- A location study was completed to determine factors (operational, economic, regional, personnel-related) influencing location options in accordance with section 6 of Government Decree 567/2002.
- Preparations were made for new tasks.
- Personnel requirements were evaluated.
- The costs of establishing the new authority were studied.
- A survey was conducted among personnel to determine attitudes towards moving to different locations.

Annual Report of the Rail Administration Board

The Rail Administration Board directs and supervises RHK's activities according to the Decree on the Finnish Rail Administration.

The Board met 11 times during the year. In addition it held a seminar together with RHK's Management Group to discuss the adequacy of RHK's personnel resources in view of its increased work load. The Board also visited the Ilmala yard to get a better idea of operations and development needs.

The Board discussed the financing of infrastructure management on a number of occasions and made decisions concerning the budget proposal and the operational and financial plan.

Renewing the Ilmala yard a top priority

In the Board's opinion improving operations at the Ilmala yard in Helsinki is an urgent and important project for passenger traffic as a whole. Practically every passenger train in Finland is serviced, fitted out and assembled in Ilmala.

The yard does not meet current service level requirements, much less future requirements. The yard's technical equipment and systems are obsolete and the poor condition of the land on which the yard is built causes constant problems. Plans to renew the Ilmala yard have reached an advanced stage and the Board hopes that a decision will be made on financing as soon as possible so that construction can begin.

The location of the yard near the Helsinki Railway Station and at the junction of the main line to the north and the coastal line is optimal, according to studies. Moving the yard would mean longer trips to the depot and therefore lower capacity utilization and slower reaction in case of disturbances, which would lower the service level.

Need for sufficient and predictable financing

In discussing the operational and financial plan for 2006–2009, the Board drew serious attention to the continued insufficiency of financing for infrastructure management. Renewing overage superstructures is indispensable. Expanding electrification and automatic train protection is also important in the Board's opinion.

The operational and financial plan contains two levels of financing. The development plan envisages €370 million a year for track renewal. The amount of money left over for replacement investments in this plan would still be more than 20 million euros less than what is required, which is 170 million euros a year. The framework plan envisages only 320 million euros a year for track renewal, with a mere 100 million euros available for replacement investments. The growing need for replacement investments

Renewing the Ilmala yard is the most urgent project for passenger transport.

Rail Administration Board (from left): Ms Kaisa Leena Välipirtti, Mr Veikko Vaikkinen, Mr Timo Poranen, Mr Markku Pyy, Ms Hannele Luukkainen.

will become a significant problem in the near future.

Efficient infrastructure management requires sufficient and predictable financing. Only in this way can RHK improve the service level, ensure the competitiveness of rail transport and maintain its market share.

Study concerning line sections with low traffic volumes

The scope of the rail network has remained unchanged so far. As a result of tight financing for infrastructure management and a sharp decline in traffic on some line sections, RHK has decided to study the future of line sections with low traffic volumes. In the Board's opinion there are clear grounds for such an analysis, in which the interested parties will be consulted.

Steady expansion of tendering

RHK has increasingly put track work out to tender in order to cut costs over the long run, among other things. RHK has for a long time purchased strategic track materials such as rails, switches, sleepers and systems on the basis of multi-year contracts. In autumn 2004 RHK invited tenders for a framework agreement covering infrastructure replacement and maintenance investments in 2005–2009.

Now RHK is expanding competition to track maintenance, beginning with northern Finland. This gradual and controlled increasing of competition is in accordance with the strategic lines that were approved by the Board in 2002.

Infrastructure management supports traffic efficiency

In addition to infrastructure management, the Board regularly monitors the development of rail traffic. Last year it was satisfying to note that punctuality exceeded the target in long-distance traffic and was extremely high in commuter traffic. This shows that infrastructure management work to improve the efficiency of rail traffic produces results.

Personnel programme to strengthen expertise

The Board discussed RHK's personnel strategy and personnel programme for 2004–2008 on several occasions last year. According to strategic lines, the essential thing is for RHK to maintain in its own organization the expertise and functions that are necessary so that it can devote attention to development work and tendering in construction and maintenance in addition to official tasks. Accordingly the Board decided to strengthen RHK's resources particularly in planning and project management.

Rail data in RHK's control

At the end of the year the Board stated its position on the development of IT management. The Board considers RHK's IT strategy a key factor for the success of infrastructure management.

The core of the strategy is taking control of rail data resources and constructing information systems utilizing this data. The Board emphasized the importance of implementing the strategy as soon as possible and allocating adequate resources for IT work.

Financial Review

Funds

Last year €558 million in net budget funds was available, including 73% (€406 million) in the regular budget, 16% (€92 million) in a supplementary budget, 10% (€57 million) in funds carried over from the previous year and 1% in funds allocated to RHK by a decision of the Ministry of Transport and Communications (€3 million). The corresponding amount in 2003 was €465 million, which means that net budget funds increased by €93 million last year

RHK's operational expenses item (basic infrastructure management) is a net budgeted item which was expected to bring in €54.6 million in income. Actual income was €2.5 million higher than the budgeted amount. Income totalled €57.1 million:

- fees: €54.0 million
- other income: €3.1 million
  - sale of assets: €2.5 million
  - compensation for damages: €0.6 million.

Taking income into account a total of €615 million was available for gross expenses, and 88% of this was actually used last year.

Unused funds included €0.9 million in appropriations for land purchasing and compensation and €0.7 million in appropriations for a structural fund project.

RHK received permission to exceed the budgeted amount for expenses on the direct line from Kerava to Lahti.

EU financing

In 2004 the EU granted a total of €15 million in TEN support for rail projects. This included €1 million for designing a Specific Transmission Module (STM), €12 million in multi-annual MIP aid for Northern Triangle projects and €2 million for the renewal of the Luumäki–Joensuu line section. The most significant Northern Triangle project receiving aid was the direct line from Kerava to Lahti. This aid will not be paid until the coming years, however, so it did not have an effect on the financial situation in 2004.

Expenses in 2004

RHK's expenses in 2004 totalled €541.7 million. This was €70.5 million or 15% more than the previous year.
Administrative costs accounted for about 2% of total expenses.

Statement of Income and Expenses

The Statement of Income and Expenses shows operational income totalling €56.4 million, which went to cover RHK's operational expenses.

The reduction in income from paid activities was due to a change in legislation regarding track fees, as a result of which some track fees were replaced by a track tax. The track tax was credited to the Ministry of Finance and in the Statement of Income and Expenses it is included in income from taxes and compulsory charges. The reduction in other income was due to the fact that TEN support was not received in 2004.

Among operational expenses the largest items were purchased services and depreciation. Purchased services include track maintenance and traffic control services, real estate maintenance services and expert and research services. In 2004 depreciation was €93 million less than the previous year. This is because superstructure inventoried in 1995 was written off in 1995–2003 on a straight-line basis in €98 million instalments.

Extraordinary income and expenses include the costs of delays resulting from track damage and track work and related compensation.

According to the Statement of Income and Expenses, operational income covered 16% of operational expenses.

Balance Sheet

The capital value of fixed assets amounted to €2,826 million at the end of the year. The net increase in assets was €345 million and depreciation totalled €141 million.

Rail structures form the bulk of fixed assets. In 2004 investments in rail structures totalled €328 million, of which development investments amounted to €188 million and replacement investments €140 million. Depreciation on the rail network totalled €137million or about the same as replacement investments.

Current receivables totalled €12 million, of which the biggest items were track tax and track fees. Current liabilities totalled €79 million (€67 million in 2003). These consisted mostly of bills that were paid in early January 2004.

The balance of the state's equity was calculated in connection with the starting balance sheet on 1 January 1998 as the difference between the value of fixed assets determined in an inventory and the value of liabilities reported by RHK. Since then equity has changed each year by an amount equal to the difference between the deficit in the Statement of Income and Expenses and the balance of accounts intended for payment traffic between RHK and other state agencies. In 2004 the change in equity was €190 million, with the deficit for the year amounting to €390 million and the surplus in the clearing account and internal transfers totalling €580 million.

In addition to payment traffic, equity transfers included a €16 million transfer from the Finnish Road Administration to RHK as its share of the Vuosaari Harbour project.

Paid activities

In paid activities the largest item was track fees, which RHK collects from the operator on the basis of a special Act. Statutory and commercial performances under this Act are specified in a Decree issued by the Ministry of Transport and Communications. Statutory performances include ticket inspection and the issuing of different kinds of licences, decisions and technical specifications and inspections. Commercial performances include real estate services and the issuing of crossing permits.

The income from statutory performances roughly covered costs.

RHK's real estate activities are the most significant function subject to charges and based on commercial principles, accounting for 99% of income from commercial activities. Rent income totalled €9.9 million (down 1%) and income from real estate activities that is based on charges amounted to €0.3 million. Separate expenses from real estate activities totalled €7.5 million. The biggest item, maintenance and repairs, totalled €6.1 million.

Income from real estate activities did not cover expenses. The operational surplus after separate expenses was €2.7 million (€1.9 million in 2003) and the operational deficit after depreciation was €2.2 million (€3.9 million in 2003). RHK nevertheless achieved its target for real estate activities in 2004. Income from real estate activities exceeded annual expenses for maintenance and 52% of capital costs (performance objective 43%).

Costs by task

RHK's tasks have been divided into network management and paid activities. Paid activities account for about 3% of total costs.

Network management consists of traffic control, track maintenance and operation along with administrative costs for investments, and planning and research activities. RHK's administrative costs (general costs) have been allocated to different functions in terms of person-years.

Total costs amounted to €434 million in 2004. This was €102 million or 19% less than the previous year. Capital costs fell by €116 million as a result of low interest rates, while operating costs rose by €14 million.

Use of funds in 2004, € million

	2004
Gross expenses	541.7
Carried over to 2005	52.0
– basic infrastructure management	(29.1)
– development of radio network	(21.1)
– development of rail network	(1.8)
Unused budget funds	21.1
Cancellation of old appropriations	1.9
Budget overruns	1.5
Available funds, total	**615.2**

Expenses in 2002–2004, € million

	2002	2003	2004
Administration	8.6	10.0	11.2
Traffic control	37.8	38.8	39.1
Real estate activities	11.7	10.6	7.7
Track maintenance and use	129.6	130.6	96.4
Repair (separately mentioned repairs)			50.7
Planning and research	5.2	6.4	8.3
Replacement investments	134.9	136.0	140.0
Investment	87.1	131.5	175.4
Radio network	0.6	3.3	8.3
Land areas	2.3	3.4	2.3
EU structural funds		0.6	2.3
Total	**417.8**	**471.2**	**541.7**

Administrative costs in 2002–2004, € thousand

	2002	2003	2004
Materials and supplies	264	258	375
Personnel expenses	5,455	6,245	6,817
Rents	733	891	1,163
Purchased services	884	1,105	1,416
Other expenses	1,128	1,204	1,136
Depreciation and interest costs	34	75	133
Total	**8,498**	**9,778**	**11,040**
Chance %		15%	15%

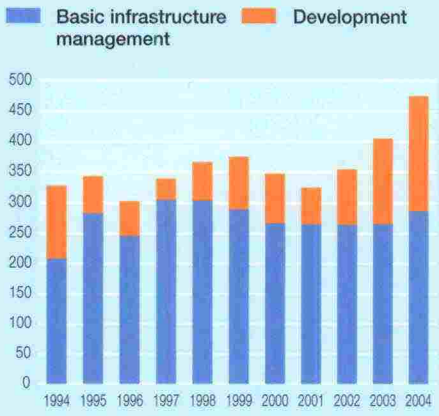
Income from paid activities in 2004, € million

	Income	Expenses	Result
Track fees	41.8		
Statutory performances	1.7	1.7	0.0
Commercial performances	10.5	12.5	– 2.0
Total	**54.0**		

Project costs in 2004, € million

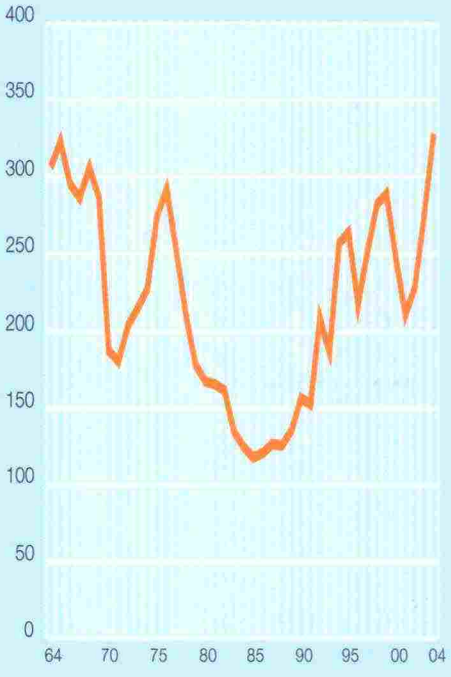
	Expenses	Budget
Tampere–Orivesi–Jyväskylä, track renewal	10.1	8.4
Kouvola–Pieksämäki, track renewal	4.4	4.0
Seinäjoki–Oulu, superstructure	13.5	14.0
Oulu–Rovaniemi, track renewal	7.5	9.1
Level crossings	5.8	6.6

Expenditure on the rail network 1994–2004, € million



Investments in the rail network 1964–2004, € million

(At fixed 2004 prices)



Costs by task in 2002–2004, € million

	Operating costs				Total costs			
	2002	2003	2004	Chance %	2002	2003	2004	Chance %
Network management	180.8	185.7	200.9	8.1	525.5	520.2	420.2	-19.2
Traffic control	38.1	39.2	39.4	0.7	39.3	40.2	40.5	0.5
Track maintenance and operation	136.1	137.6	150.0	9.0	479.7	471.1	368.3	-21.8
Planning and research	6.5	8.9	11.4	27.6	6.5	8.9	11.4	27.6
Paid activities	9.7	10.5	9.8	-6.4	15.6	15.9	14.3	-10.3
Commercial performances	8.0	8.7	8.1	-7.7	13.9	14.2	12.5	-11.6
Statutory performances	1.7	1.7	1.7	0.1	1.7	1.7	1.7	0.1
Total costs	190.5	196.2	210.7	7.4	541.0	536.2	434.4	-19.0

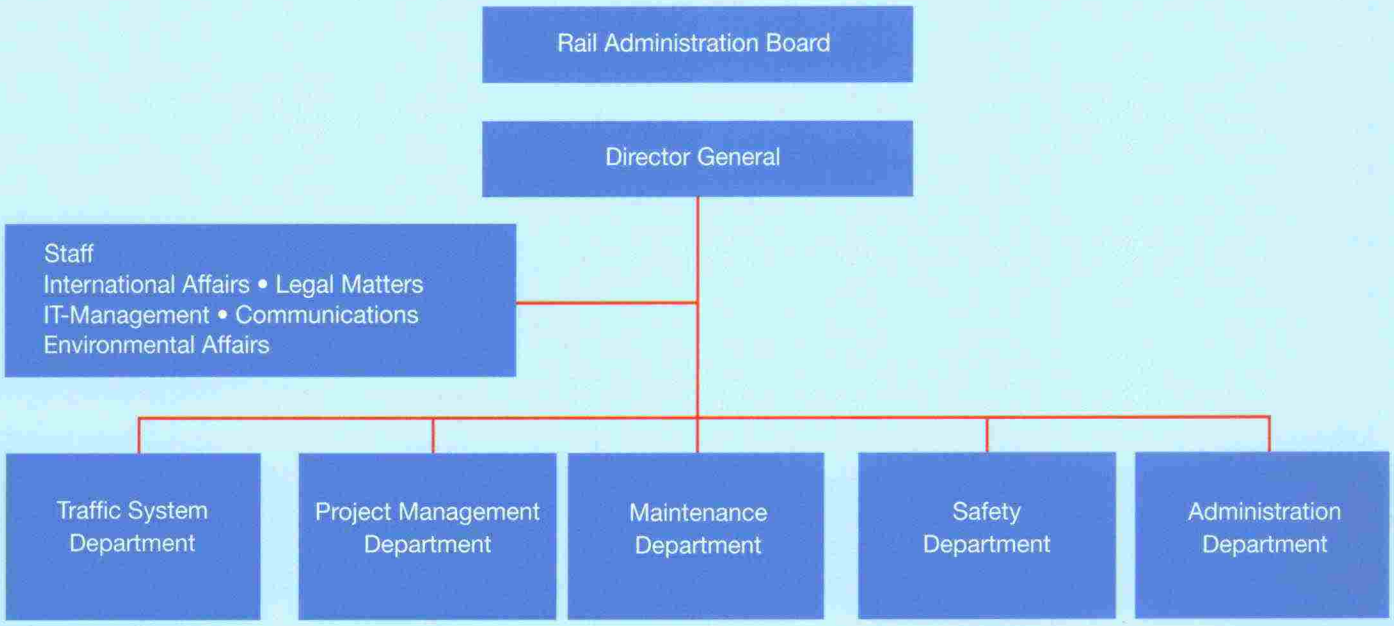
Statement of Income and Expenses

€1 000		1.1.–31.12.2004		1.1.–31.12.2003
OPERATIONAL INCOME				
Fees	43,964		46,974	
Rents and user charges	10,013		10,060	
Other operational income	2,452	56,429	12,468	69,502
OPERATIONAL EXPENSES				
Material, supplies and goods	376		258	
Personnel expenses	6,823		6,225	
Rents	1,417		1,128	
Purchased services	197,781		182,448	
Other expenses	1,615		1,698	
Depreciation	140,994	349,006	234,323	426,080
DEFICIT I		**- 292,577**		- 356,578
FINANCIAL INCOME AND EXPENSES				
Financial income	29		23	
Financial expenses	- 33	- 4	- 31	- 8
EXTRAORDINARY INCOME AND EXPENSES				
Extraordinary income	631		12,035	
Extraordinary expenses	- 3,136	- 2,505	- 3,364	8,671
DEFICIT II		**- 295,086**		- 347,915
INCOME FROM TAXES AND OTHER COMPULSORY CHARGES				
Taxes and compulsory charges	16,306		12,583	
VAT received	4,155		3,292	
VAT paid	- 115,689	- 95,228	- 100,346	- 84,471
DEFICIT FOR THE YEAR		**- 390,314**		- 432,386

Balance Sheet

€1 000	2004		2003	
ASSETS				
FIXED ASSETS				
Intangible assets				
Intangible rights		288		211
Tangible assets				
Land and water areas	4,432		4,432	
Building land and water areas	83,296		81,584	
Buildings	36,456		41,656	
Structures	2,344,269		2,176,431	
Machinery and equipment	5,854		6 ,768	
Furninshings	32		3	
Advances and projects in progress	351,518	2,825,857	310,942	2,621,816
Fixed assets		2,826,145		2,622,027
INVENTORIES AND FINANCIAL ASSETS				
Current receivables				
Accounts receivable	10,527		13,579	
Other current receivables	2,013		1,856	
Advance payments	0	12,540	4	15,439
Cash, bank and other				
Cash account		0		0
Inventories and financial assets		12,541		15,439
TOTAL ASSETS		**2,838,685**		2,637,466
EQUITY AND LIABILITIES				
EQUITY				
State equity				
State's equity at 1.1.1998	2,371,022		2,371,022	
Change in equity in previous years	198,501		146,488	
Equity transfers	580,310		484,399	
Deficit for the year	- 390,314	2,759,519	- 432,386	2,569,523
LIABILITIES				
Currents liabilities				
Advance payments	41		53	
Accounts payable	75,974		64,910	
Inter-agency tranfers	165		148	
Pyable items	108		99	
Accrued expenses	932		838	
Other current liabilities	1,946	79,166	1,895	67,943
TOTAL EQYUITY AND LIABILITIES		**2,838,685**		2,637,466

Organization



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Ms Hannele Luukkainen, Chairman, Finnish Traffic Association
Mr Markku Pyy, Planning Manager, Finnish Rail Administration
Mr Veikko Vaikkinen, CFO, VR-Group Ltd
Ms Kaisa Leena Välipirtti, Senior Advisor, Infrastructure, Ministry of Traffic and Communications

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Facts about Finland's Rail Network

31.12.2004

First line: Helsinki–Hämeenlinna, 1862
Gauge: 1,524 mm
Total length of railway lines: 5,741 km
Total track length including sidings: 8,596 km
Lines with two or more tracks: 507 km
Tracks with concrete sleepers: 3,760 km
Sleepers/km: 1,640
Long-welded tracks: 4,445 km
Type of new rails on main lines: 60E1 (weight 60 kg/m)
Electrified line: 2,619 km
Electrification system: 25 kV 50 Hz
Block-protected line: 2,568 km
Centrally controlled line: 2,448 km
Tunnels: 42
Total length of tunnels: 25,284 m
Railway bridges: 2,175
Bridges over railway line: 838
Number of level crossings: 3,835, including 3,293 on main lines
Land owned by the Finnish Rail Administration: 28,100 ha
Buildings owned by the Finnish Rail Administration: 2,425, with a total volume of 1.3 million m^3

Photos: Sakari Haapaniemi, Risto Laine, Markku Leskinen, Markku Nummelin, RHK photo archives
Layout and DTP: Oura & Kumppanit/Inclus Communications
Print: Frenckell Printing Works, Espoo 2005